Virginia Electric and Power Company ("Dominion Virginia Power" or DVP) proposes to rebuild its portion of the existing 500 kV Mt. Storm - Doubs Line #551 MSD551) in Appalachian National Scenic Trail (APPA) and Harpers Ferry National Historical Park (HAFE) land in Loudoun County, VA and Jefferson County, WV, respectively.

MSD551 runs 99.26 miles from the DVP Mt. Storm Power Station in Grant County, West Virginia to First Energy's (FE) Doubs Substation in Maryland. DVP proposes to remove MSD551's existing 500 kV weathering steel (COR-TEN®) lattice towers, constructed before 1966, and replace them with a new 500 kV galvanized steel lattice tower line located entirely within existing right-of-way (ROW) and to replace the existing conductors with 3-1351 ACSR conductors, for the entire length of the MSD551. Rebuilding the MSD551 with modem facilities and in accordance with good utility engineering practices and National Electric Safety Code (NESC) guidelines is predicted by DVP to increase the capacity of the line by approximately 66%, from 2,598 MVA to 4,325 MVA.

According to DVP, the critical importance of the Mt. Storm - Doubs Line to the regional transmission system, and the heavy electrical load it carries, previously made it impractical to remove the line from service long enough to rebuild without severely placing the grid at risk. However, they state, with the new 500 kV TrAIL Line currently energized, enough load relief will be available to allow DVP to take the Mt. Storm - Doubs Line out of service temporarily during periods in the spring and fall over the next several years to completely rebuild the line by June 2015.

The project area at APPA and HAFE is a cleared ROW approximately 1,995 ft. in length (1,055 ft. on APPA, 940 ft. on HAFE). The current ROW is 275 ft. wide and contains the existing MSD551 500 kV transmission line and one FE-owned 138 kV transmission line. DVP proposes to replace its transmission line with a new 500 kV transmission line within the existing corridor; the 138kV line will remain as-is. DVP plans to limit work to within its 160 ft. portion of the ROW. Though DVP has the authority from FE to use that portion of the ROW, any plan changes to include work within the FE ROW will have to be approved by the NPS.

Three structures are currently within NPS lands and include existing structure APPA 1 and APPA 2 at APPA, and HAFE 1 at HAFE. These are lattice steel structures with dual bundle conductors and are proposed to be replaced with taller lattice steel towers supporting triple bundle conductors. The tower height increase is necessary to accommodate the new conductor amperage and associated operating temperature that at full capacity will sag more than the current configuration. Figure 1 is a regional scale map of the project area, and Figure 2 shows the existing structure locations. The tower numbers and height for both the existing and the proposed structures are shown below in Table 1 below.



Figure 1. Regional map of the NPS MSD551 project area



Figure 2. Current tower locations, NPS MSD551 project area

Table 1: Existing Towers vs. Proposed Towers		
Tower	Current Height (ft.)	Proposed Height (ft.)
APPA 1	99	101
APPA 2	74	106
HAFE 1	90	106